REMARKS / ARGUMENTS

I. General Remarks and Disposition of the Claims

Please consider the application in view of the following remarks. Applicants thank the Examiner for careful consideration of this application, including the references that Applicants have submitted in this case and, pursuant to MANUAL OF PATENT EXAMINING PROCEDURE §609.02, all references submitted in the patent applications to which this application claims priority under 35 U.S.C. §120.

At the time of the Office Action, claims 1-3, 5, and 7-38 were pending in this application. Of these, claims 11-38 were indicated as withdrawn from consideration. Claims 39-68 were previously cancelled. Claims 1-3, 5, and 7-10 were rejected in the Office Action. By this paper, claims 1, 9, 11, and 36 have been amended, and claims 7 and 8 have been cancelled.

These amendments are supported by the specification as filed. Amended claim 1 is supported by at least original claim 8 and paragraph [0021]. All the amendments are made in a good faith effort to advance the prosecution on the merits of this case. It should not be assumed that the amendments made herein were made for reasons related to patentability. Applicants respectfully request that the above amendments be entered and further request reconsideration in light of the amendments and remarks contained herein.

II. Remarks Regarding Rejections Under 35 U.S.C. § 102

Claims 1 – 3, 5, and 7 – 10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2003/0013871 A1 to Mallon et al. (hereinafter *'Mallon'*).

Claims 1-3, 5, and 7-10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,081,439 B2 to Sullivan et al. (hereinafter *'Sullivan'*).

In each case, Applicants respectfully disagree. Applicants respectfully submit that the cited references do not disclose each and every limitation of claims 1 – 3, 5 and 7 – 10, as required to anticipate these claims under 35 U.S.C. § 102. See MPEP § 2131. To this end, it is well settled law that a claim is anticipated under 35 U.S.C. § 102 "only if each and every element as set forth in the claim is found, either expressly or

inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP § 2131.

Regarding the rejection over *Mallon*, Applicants respectfully assert that this reference teaches a different reaction product than that now claimed. The reaction product of claim 1 consists of alkyl chains having a carbon chain length between about 4 and about 22 carbons bound to the hydrophilic polymer.

Mallon teaches polysaccharide ethers (see *Mallon*, paragraphs [0052], [0062] and [0063]). In paragraph [0062] *Mallon* teaches reacting a polysaccharide with alkyl halides or alkylene oxides in order to produce a polysaccharide ether. *Mallon* further teaches in the same paragraph that suitable alkyl halides include ethyl chloride or methyl chloride. In the case of alkyl halides, *Mallon* fails to anticipate claim 1, since these alkyl halides fail to produce a carbon chain length between about 4 and about 22 carbons, as recited by claim 1. In the case of alkylene oxides, these compounds are not selected from the group consisting of an alkyl halide, a sulfonate, and a sulfate, as recited by claim 1.

Mallon goes on to teach in paragraph [0063] that the polysaccharide ethers may be substituted with one or more desired substituents, including hydrophobic substituents having about 8 to about 24 carbon atoms per molecule. In this case, *Mallon* is teaching a compound having both hydrophobic substituents, as taught in paragraph [0063], **and** ether substituents, as taught in paragraph [0062]. *Mallon* fails to teach adding a hydrophobic substituent to a polysaccharide alone. Since claim 1 recites that the reaction product consists of alkyl chains bound to the hydrophilic polymer, *Mallon* fails to anticipate the claim.

Regarding the rejection over *Sullivan*, Applicants respectfully assert that this reference fails to expressly or inherently teach all of the recited claim elements. In this case, the Examiner has based the rejection on *Sullivan's* teachings that the pendant hydrophobic chains comprise approximately 12 to 24 carbon atoms and include an acetal, an amide, an ether or an ester bond (see *Sullivan*, col. 6, lines 3 – 7; also see Office Action page 7). In this regard, *Sullivan* fails to anticipate claim 1, since this reference fails to expressly teach that a hydrophobic compound selected from an alkyl halide, a sulfonate, or a sulfate is used to form any of these bonds. Further, it is not

inherent that an acetal, an amide, an ether, or an ester bond is formed from any of these hydrophobic compounds. There are other methods known to those of ordinary skill in the art for synthesizing these types of bonds, many of which do not involve the use of an alkyl halide, a sulfonate, or a sulfate.

In addition, the Examiner relied upon *Sullivan's* teaching of hydrophobically-modified chitosan found in col. 6, lines 12-27 (*see* Office Action page 7). These teachings also fail to expressly or inherently teach an alkyl halide, a sulfonate or a sulfate. *Sullivan* teaches that N-alkylated chitosan can be prepared by reductive amination and that N-acylated chitosan can be produced. Reductive amination involves a reaction of an aldehyde with an amine in the presence of a reducing agent to form an N-alkylated amine. N-acylation of an amine utilizes a carboxylic acid derivative. Neither of these reactions uses a hydrophobic compound selected from an alkyl halide, a sulfonate, or a sulfate. Hence, *Sullivan* fails to anticipate claim 1.

In view of the foregoing remarks, Applicants respectfully assert that the cited references fail to disclose each and every limitation of independent claim 1. Claims 2, 3, 5, 9, and 10 depend either directly or indirectly from claim 1, thereby incorporating all of its limitations, and are not anticipated for at least the same reasons. *See* 35 U.S.C. § 112 4 (2004) and *In re Fine,* 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Accordingly, Applicants respectfully request that the rejections of claims 1-3, 5, and 7-10 under 35 U.S.C. § 102 be withdrawn.

III. Interview

Applicants' representatives Iona Kaiser and Thomas Thrash conducted an interview with Examiner Figueroa on January 4, 2011. The subject of the interview concerned the Examiner's statements regarding the species election set forth in the Office Action (see Office Action pages 2 – 3, items 3 – 5). The status of the claims was not discussed.

Applicants previously elected alkyl halides as the hydrophobic compound species to be examined in a response dated September 29, 2006. Applicants' response of January 8, 2010 did not contain alkyl halides as an alternative selection for the hydrophobic compound in claim 1. Applicants' response of June 23, 2010 reintroduced alkyl halides as an alternative selection for the hydrophobic compound in claim 1. The

Examiner clarified that the January 8, 2010 response was treated as a constructive election of sulfate, sulfonate, and organic acid derivatives as the elected species, thereby making alkyl halides a non-elected species upon its reintroduction in the June 23, 2010 response. The Examiner agreed to consider the patentability of alkyl halides as the hydrophobic compound upon the indication of allowable subject matter.

IV. No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, Applicants have merely discussed example distinctions from the cited references. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements, such as, for example, any statements relating to what would be obvious to a person of ordinary skill in the art.

SUMMARY

In light of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections. Applicants further submit that the application is now in condition for allowance, and earnestly solicit timely notice of the same. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Applicants believe that no fees are due in association with the filing of this response. Should the Commissioner deem that any fees are due, including any fees for extensions of time, Applicants respectfully request that the Commissioner accept this as a Petition Therefore, and direct that any additional fees be charged to McDermott Will & Emery's Deposit Account No. 500417, Order Number 086108-0165.

Respectfully submitted,

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